

Attorney's Docket: 2002DE432
Serial No.: 10/666,450
Art Unit 1751
Response Office Action, Dated 12/22/2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Withdrawn) A liquid washing, cleaning, disinfecting or bleaching composition comprising amphiphilic copolymer which includes structural units derived from

- a) an acryloyldimethyltaurate selected from the group consisting of acryloyldimethyltauric acid in free form, partially neutralized form, completely neutralized form, and mixtures thereof having a cation selected from the group consisting of monovalent inorganic, divalent inorganic, monovalent organic, divalent organic, and mixtures thereof, and
- b) a macromonomer comprising at least one hydrophobic comonomer based on ethylenically unsaturated polyalkylene alkoxylates.

2.(Withdrawn) The liquid washing, cleaning, disinfecting or bleaching composition as claimed in claim 1, in which the copolymers have a molecular weight M_w of from 10^3 g/mol to 10^9 g/mol.

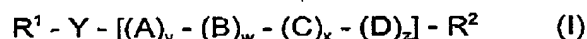
3.(Withdrawn) The liquid washing, cleaning, disinfecting or bleaching composition as claimed in claim 1, in which the cation of the acryloyldimethyltaurate (structural unit a) is selected from the group consisting of Li^+ , Na^+ , K^+ , Mg^{++} , Ca^{++} , Al^{+++} , NH_4^+ , an alkylamine, and mixtures thereof wherein the alkylamine is selected from the group consisting of monoalkylammonium, dialkylammonium, trialkylammonium, tetraalkylammonium, and mixtures thereof, where the alkyl

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substituents of the alkylamine are, independently of one another, (C₁-C₂₂)-alkyl radicals.

4.(Withdrawn) The liquid washing, cleaning, disinfecting or bleaching composition as claimed in claim 1, in which, the acryloldimethyltaurate is 0.1 to 99.9% by weight of the amphiphilic copolymer.

5.(Withdrawn) The liquid washing, cleaning, disinfecting or bleaching composition as claimed in claim 1, in which the macromonomer b) is a compound according to formula (I)



in which

R¹ is a function capable of polymerization from the group of vinylically unsaturated compounds which is suitable for building up polymeric structures in a free-radical manner,

R² is a linear or branched aliphatic, olefinic, cycloaliphatic, arylaliphatic or aromatic (C₁-C₆₀)-hydrocarbon radical, OH, -NH₂, -N(CH₃)₂ or is the structural unit [-Y-R¹],

Y is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -S-, -O-CH₂-CH(O-)-CH₂OH, -O-CH₂-CH(OH)-CH₂O-, -O-SO₂-O-, -O-SO-O-, -PH-, -P(CH₃)-, -PO₃-, -NH-, N(CH₃)-, and mixtures thereof,

A, B, C and D are derived from the group consisting of acrylamide, methacrylamide, ethylene oxide, propylene oxide, AMPS, acrylic acid, methacrylic acid, methyl

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methacrylate, acrylonitrile, maleic acid, vinyl acetate, styrene, 1,3-butadiene, isoprene, isobutene, diethylacrylamide, diisopropylacrylamide, and mixtures thereof, v, w, x and z, independently of one another are 0 to 500, where the sum of v, w, x and z must on average be ≥ 1 .

6.(Withdrawn) The liquid washing, cleaning, disinfecting or bleaching composition as claimed in claim 1, in which the molecular weight of the macromonomer b) is 200 g/mol to 10^6 g/mol.

7.(Withdrawn) The liquid washing, cleaning, disinfecting and bleaching composition as claimed in claim 1 further comprising a comonomer c) selected from the group consisting of

an olefinically unsaturated monomer selected from the group consisting of N-vinylformamide (VIFA), N-vinylmethylformamide, N-vinylmethylacetamide (VIMA), N-vinylacetamide, and mixtures thereof;

cyclic N-vinylamides (N-vinylactams) with a ring size from 3 to 9[.];

amides of acrylic acid and methacrylic acid;

alkoxylated acrylamides and methacrylamides[.];

N,N-dimethylaminomethacrylate; diethylaminomethyl methacrylate; acryl- and methacrylamidoglycolic acid; 2- and 4-vinylpyridine; vinyl acetate; glycidyl methacrylate; styrene; acrylonitrile; stearyl acrylate; lauryl methacrylate, and mixtures thereof.

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8.(Withdrawn) The liquid washing, cleaning, disinfecting and bleaching composition as claimed in claim 1, wherein the amphiphilic copolymers further comprise structural units derived from comonomer c) comprising monovinylally unsaturated comonomers different from a) and b).

9.(Withdrawn) The liquid washing, cleaning, disinfecting and bleaching composition as claimed in claim 1, wherein the alkyl substituents of the alkylamine are occupied by up to 3(C₂-C₁₀)-hydroxyalkyl groups.

10.(Withdrawn) The liquid washing, cleaning, disinfecting and bleaching composition as claimed in claim 7, wherein the cyclic N-vinylamides(N-vinylactams) with a ring size from 3 to 9 are selected from the group consisting of N-vinylpyrrolidone(NVP), N-vinylcaprolactam, and mixtures thereof.

11.(Withdrawn) The liquid washing, cleaning, disinfecting and bleaching composition as claimed in claim 7, wherein the amides of acrylic acid and methacrylic acid are selected from the group consisting of acrylamide, methacrylamide, N,N-dimethylacrylamide, N,N-diethylacrylamide, N,N-diisopropylacrylamide, and mixtures thereof.

12.(Withdrawn) The liquid washing, cleaning, disinfecting and bleaching composition as claimed in claim 7, wherein the alkoxylated acrylamides and methacrylamides are selected from the group consisting of hydroxyethyl

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methacrylate, hydroxymethylmethacrylamide, hydroxyethylmethacrylamide, hydroxypropylmethacrylamide, succinic mono-[2-(methacryloyloxy)ethyl ester], and mixtures thereof.

13.(Currently Amended) A method for cleaning a hard surface comprising contacting the hard surface with a cleaner comprising the liquid washing, cleaning, disinfecting and bleaching composition comprising an amphiphilic copolymer which includes structural units derived from

- a) an acryloyldimethyltaurate selected from the group consisting of acryloyldimethyltauric acid in free form, partially neutralized form, completely neutralized form, and mixtures thereof having a cation selected from the group consisting of monovalent inorganic, divalent inorganic, monovalent organic, divalent organic, and mixtures thereof, and
- b) a macromonomer comprising at least one hydrophobic comonomer based on ethylenically unsaturated polyalkylene alkoxylates;

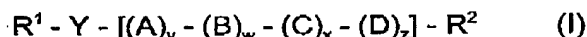
wherein said contacting takes place at a pH less than 5.

14.(Previously Presented) The method of claim 13, further comprising from 0.1 to 30 weight percent peroxide.

15.(Withdrawn) A liquid cleaning gel comprising a disinfectant, an acidic component, and the liquid washing, cleaning, disinfecting and bleaching composition of claim 1.

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16.(Previously Presented) The method of claim 13, wherein the macromonomer b) is a compound according to formula (I)



in which

R¹ is a function capable of polymerization from the group of vinylically unsaturated compounds which is suitable for building up polymeric structures in a free-radical manner,

R² is a linear or branched aliphatic, olefinic, cycloaliphatic, arylaliphatic or aromatic (C₁-C₅₀)-hydrocarbon radical, OH, -NH₂, -N(CH₃)₂ or is the structural unit [-Y-R¹],

Y is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -S-, -O-CH₂-CH(O-)-CH₂OH, -O-CH₂-CH(OH)-CH₂O-, -O-SO₂-O-, -O-SO-O-, -PH-, -P(CH₃)-, -PO₃-, -NH-, N(CH₃)-, and mixtures thereof,

A, B, C and D are derived from the group consisting of acrylamide, methacrylamide, ethylene oxide, propylene oxide, AMPS, acrylic acid, methacrylic acid, methyl methacrylate, acrylonitrile, maleic acid, vinyl acetate, styrene, 1,3-butadiene, isoprene, isobutene, diethylacrylamide, diisopropylacrylamide, and mixtures thereof, v, w, x and z, independently of one another are 0 to 500, where the sum of v, w, x and z must on average be ≥ 1 .

17.(Previously Presented) The method of claim 13, wherein said copolymer further comprises a comonomer c) selected from the group consisting of an olefinically unsaturated monomer selected from the group consisting of N-vinylformamide (VIFA), N-vinylmethylformamide, N-vinylmethylacetamide (VIMA), N-

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vinylacetamide, and mixtures thereof;
cyclic N-vinylamides (N-vinylactams) with a ring size from 3 to 9;
amides of acrylic acid and methacrylic acid;
alkoxylated acrylamides and methacrylamides;
N,N-dimethylaminomethacrylate; diethylaminomethyl methacrylate; acryl- and
methacrylamidoglycolic acid; 2- and 4-vinylpyridine; vinyl acetate; glycidyl
methacrylate; styrene; acrylonitrile; stearyl acrylate; lauryl methacrylate, and
mixtures thereof.

18.(Previously Presented) The method of claim 13, further comprising a surfactant
selected from the group consisting of anionic, nonionic, cationic, amphoteric
surfactants, and mixtures thereof.

19.(Previously Presented) The method of claim 13, wherein said copolymer has a
molecular weight M_w of from 10^3 g/mol to 10^9 g/mol.

20.(Previously Presented) The method of claim 13, wherein the cation of the
acryloyldimethyl-taurate (structural unit a) is selected from the group consisting of
 Li^+ , Na^+ , K^+ , Mg^{++} , Ca^{++} , Al^{+++} , NH_4^+ , an alkylamine, and mixtures thereof wherein the
alkylamine is selected from the group consisting of monoalkylammonium,
dialkylammonium, trialkylammonium, tetraalkylammonium, and mixtures thereof,
where the alkyl substituents of the alkylamine are, independently of one another,
(C_1 - C_{22})-alkyl radicals.

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- 21.(Previously Presented) The method of claim 13, in which, the acryloldimethyltaurate is 0.1 to 99.9% by weight of the amphiphilic copolymer.
- 22.(Previously Presented) The method of claim 13, in which the molecular weight of the macromonomer b) is 200 g/mol to 10^6 g/mol.
- 23.(Previously Presented) The method of claim 13, wherein the amphiphilic copolymers further comprise structural units derived from comonomer c) comprising monovinylally unsaturated comonomers different from a) and b).
- 24.(Previously Presented) The method of claim 13, wherein the alkyl substituents of the alkylamine are occupied by up to 3(C₂-C₁₀)-hydroxyalkyl groups.
- 25.(Previously Presented) The method of claim 17, wherein the cyclic N-vinylamides(N-vinylactams) with a ring size from 3 to 9 are selected from the group consisting of N-vinylpyrrolidone(NVP), N-vinylcaprolactam, and mixtures thereof.
- 26.(Previously Presented) The method of claim 17, wherein the amides of acrylic acid and methacrylic acid are selected from the group consisting of acrylamide, methacrylamide, N,N-dimethylacrylamide, N,N-diethylacrylamide, N,N-diisopropylacrylamide, and mixtures thereof.

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27.(Previously Presented) The method of claim 17, wherein the alkoxyated acrylamides and methacrylamides are selected from the group consisting of hydroxyethyl methacrylate, hydroxymethylmethacrylamide, hydroxyethylmethacrylamide, hydroxypropylmethacrylamide, succinic mono-[2-(methacryloyloxy)ethyl ester], and mixtures thereof.

28.(Canceled)